NATIONAL WEATHER SERVICE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Special Weather Briefing

NATIONAL WEATHER SERVICE ATLANTA

3 PM Wednesday January 12, 2022

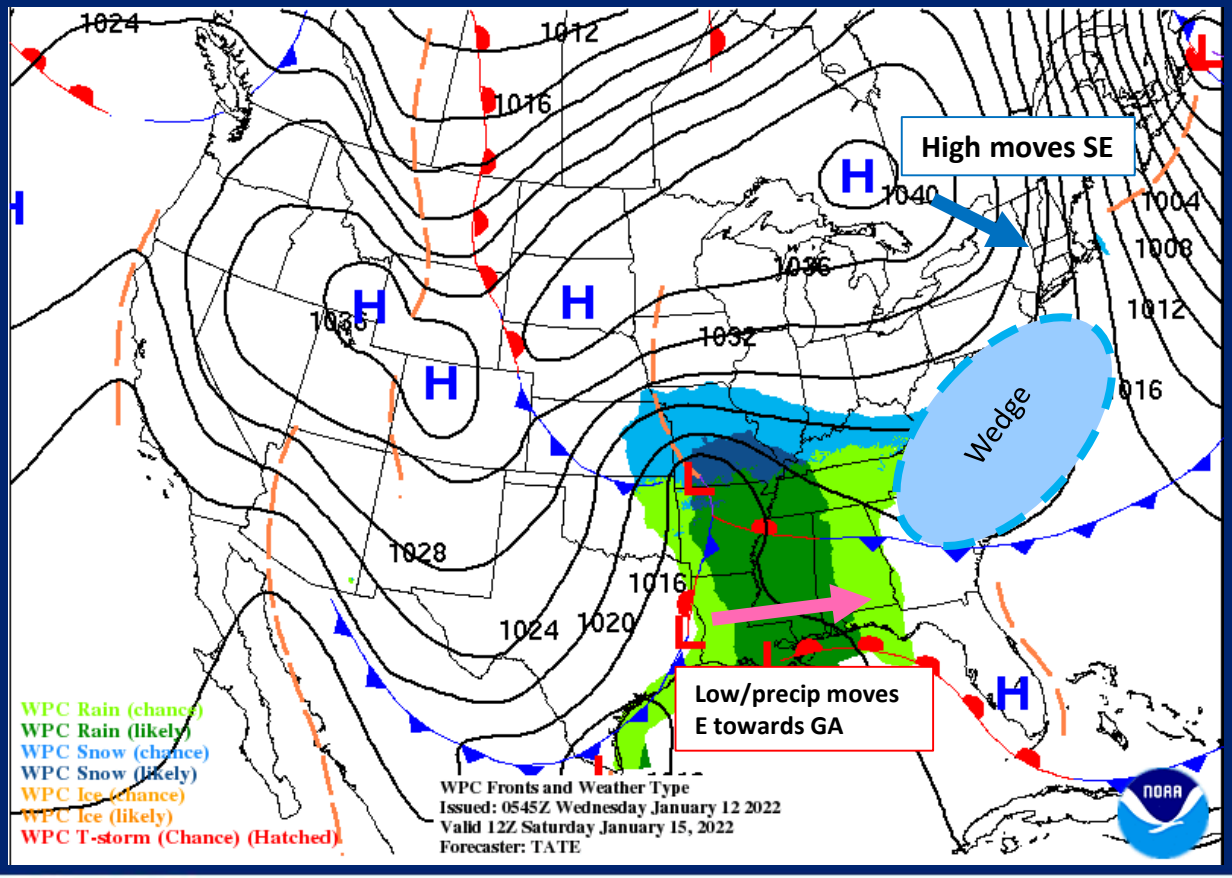
Disclaimer: *The information contained within this briefing is time sensitive which should be taken into account while viewing.*

Overview

- Considerable disagreement remains between model solutions.
- Potential for winter weather from Saturday evening into Sunday evening in north Georgia.
- Factors that will impact the forecast:
  - High pressure moving into New England – development of CAD wedge in far north Georgia.
  - Track and development of surface low pressure – how far north warmer air will spread.
- Low pressure system trending further north in recent forecast runs.
- With all of the moving parts, it remains too early to provide deterministic snow and ice amounts at this time.

Setup: Forecast Factors

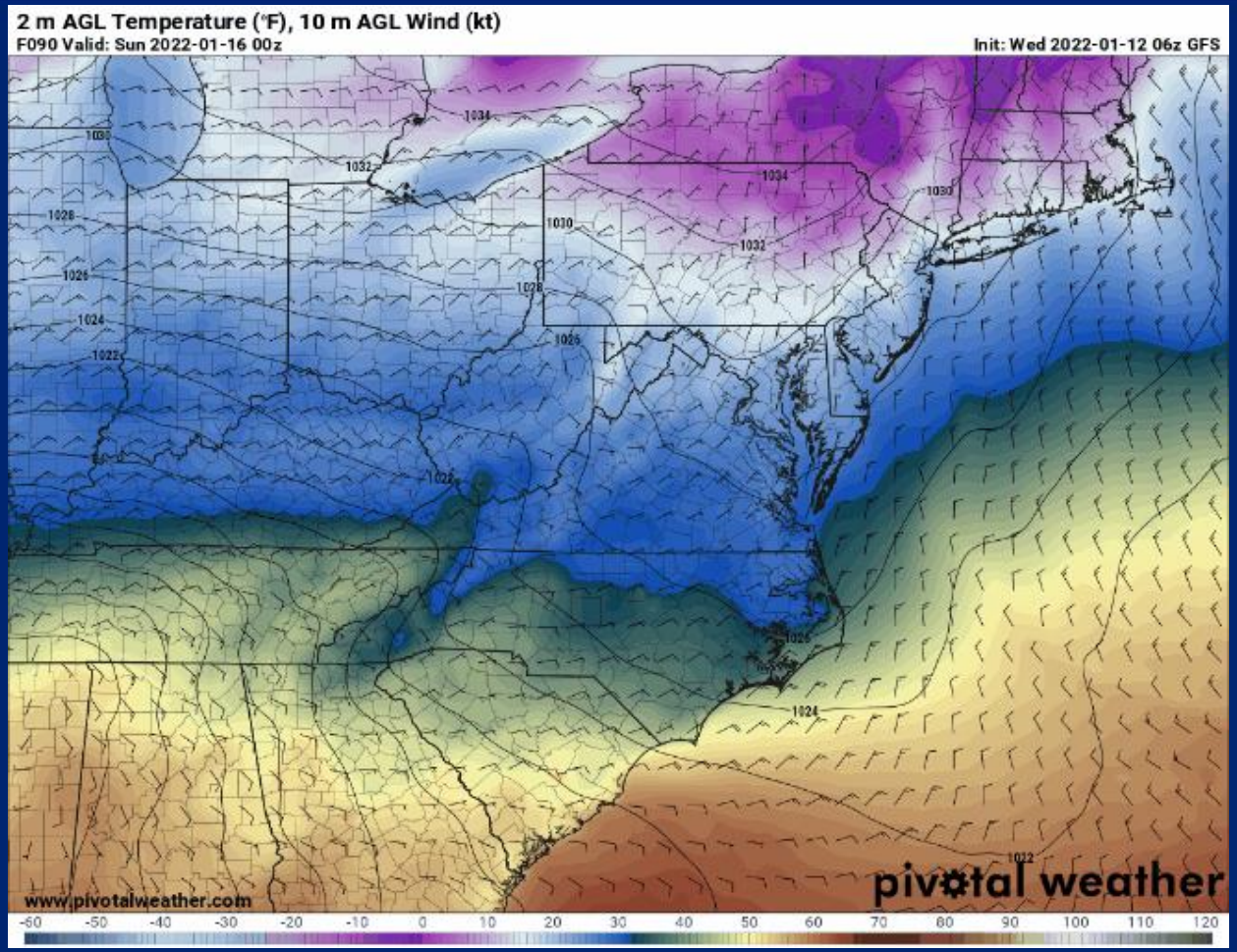
12Z Saturday WPC Forecast



Evolution of forecast dependent upon:

- Strong high pressure building into New England.
  - Development of CAD wedge in north GA
- Track of the low pressure system as it moves through the Southeast.

CAD Wedge Development



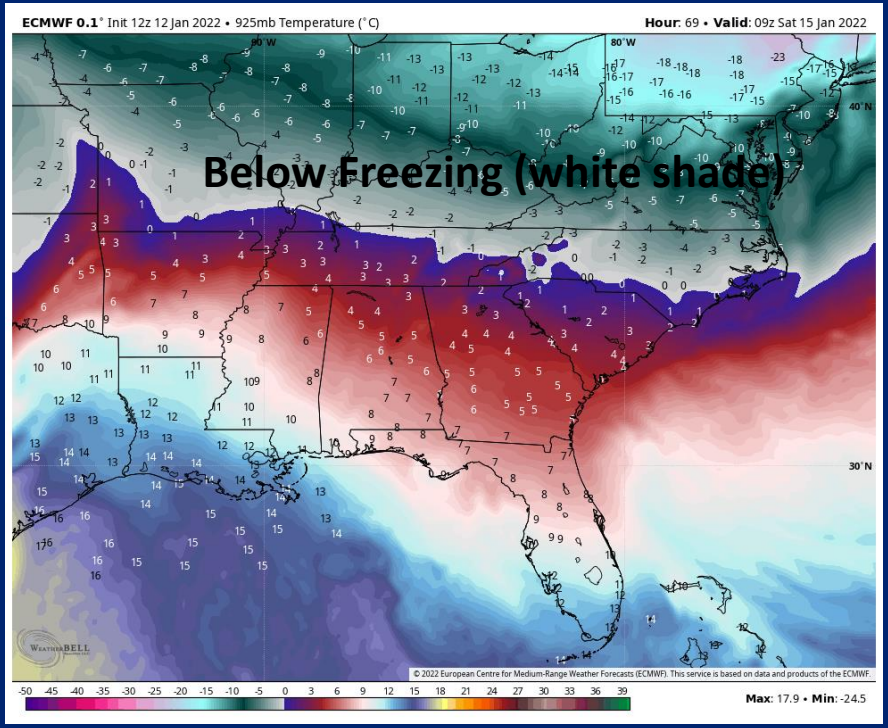
As surface high moves into New England, cold air damming develops down the eastern side of the Appalachians.

A stronger wedge would mean a greater chance for freezing rain during the day Sunday

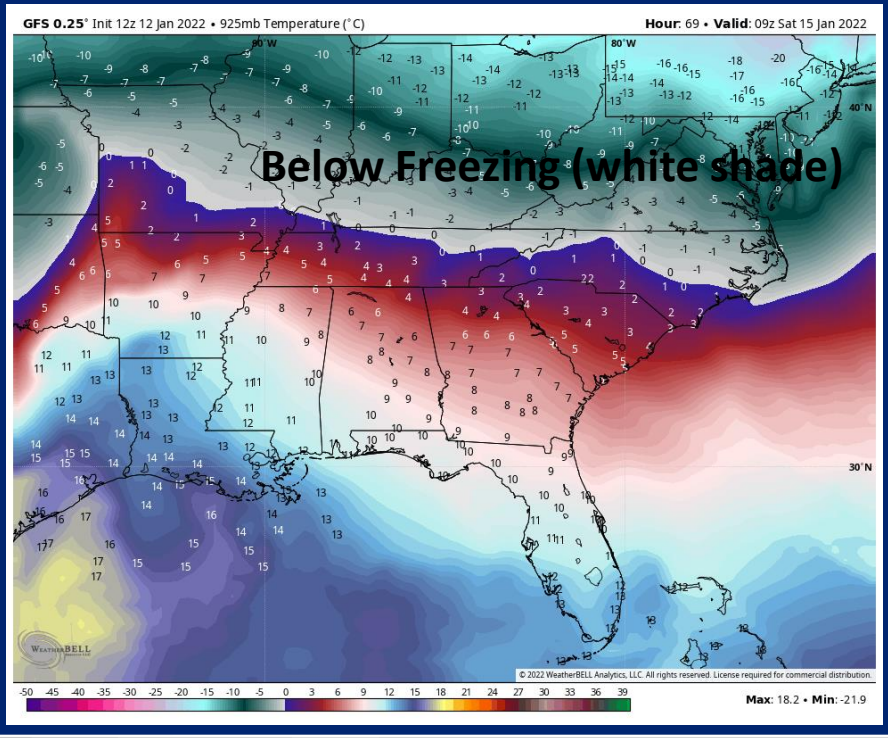
GFS/ECMWF Cold Nose

(~2000 foot Temps
Sat AM – Mon AM)

ECMWF



GFS

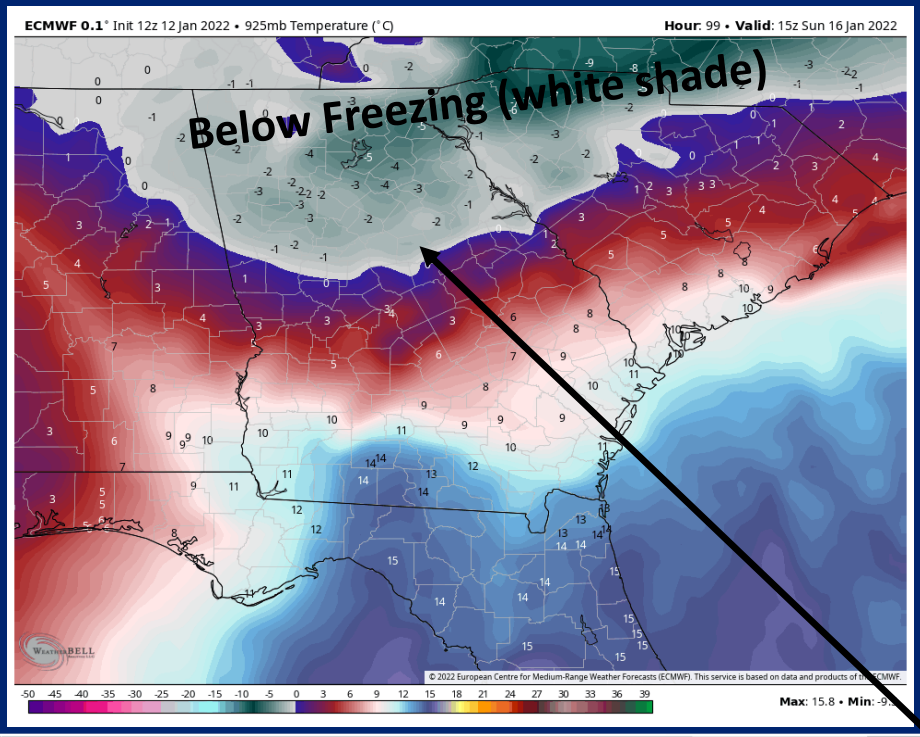


Differences in the Low position on each model leads to differences in the forecast temperatures in what we refer to as the cold nose (Temperatures at ~2000'). Note the further south/west extent on the ECMWF

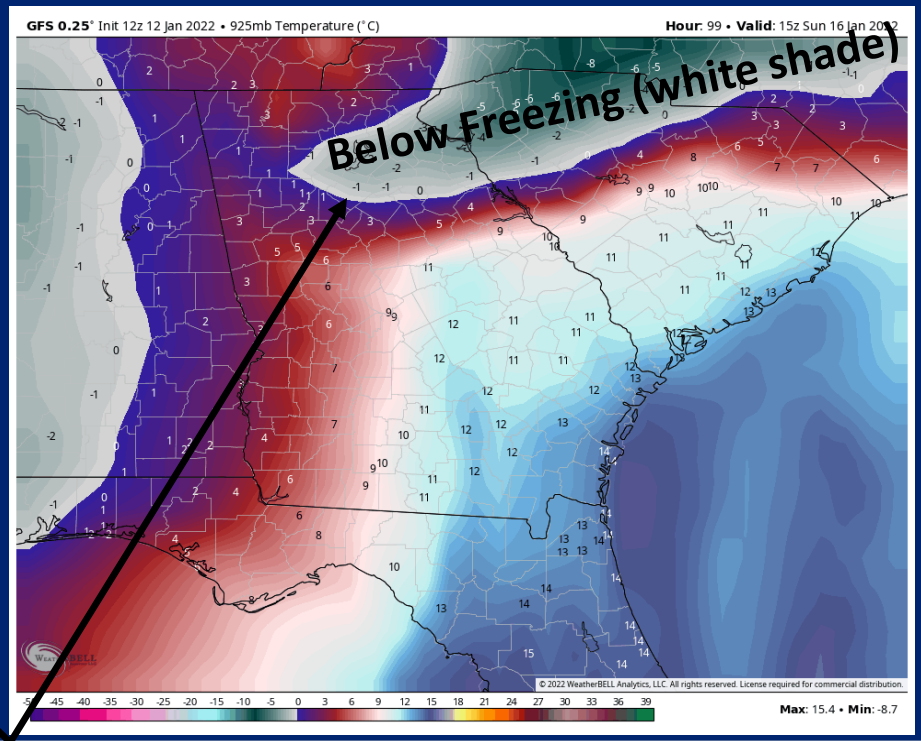
GFS/ECMWF Cold Nose

(~2000 foot Temps 10 AM Sunday)

ECMWF

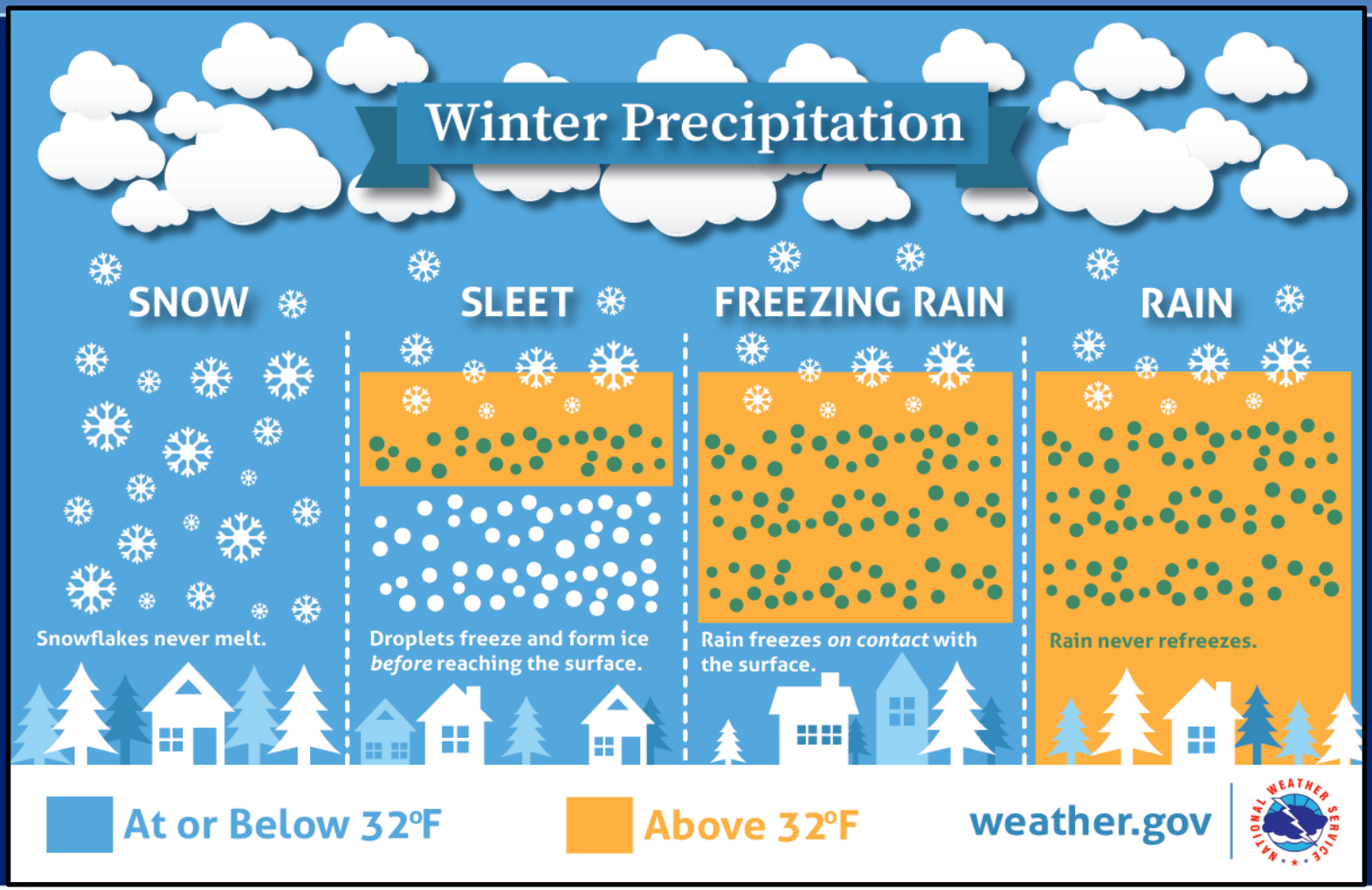


GFS



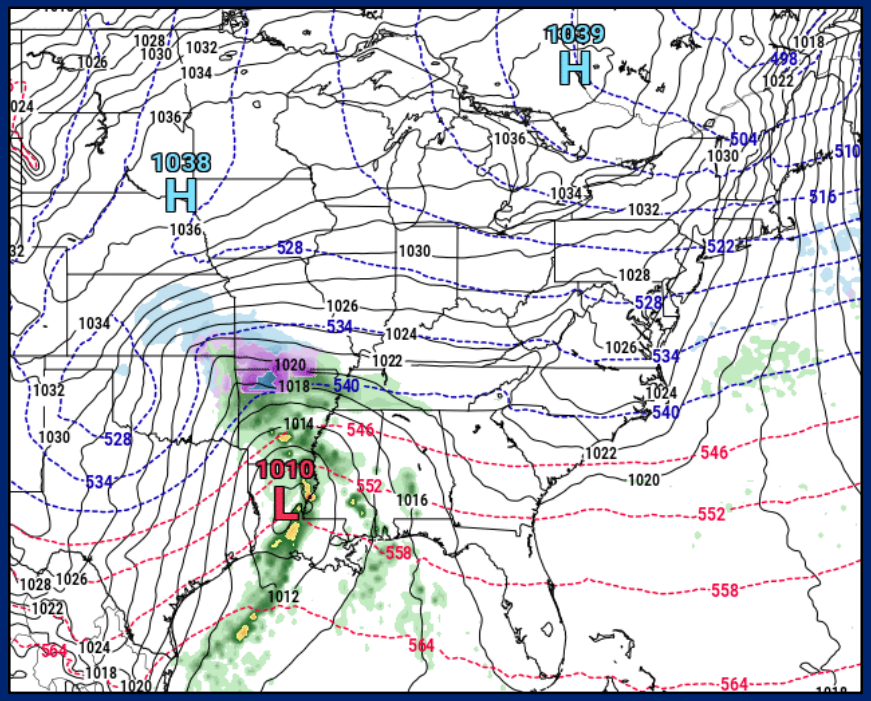
Notice how much colder the ECMWF is at 10AM Sunday…leading to a greater coverage and amount of frozen precipitation (Freezing Rain, sleet and snow).

CAD Wedge Development

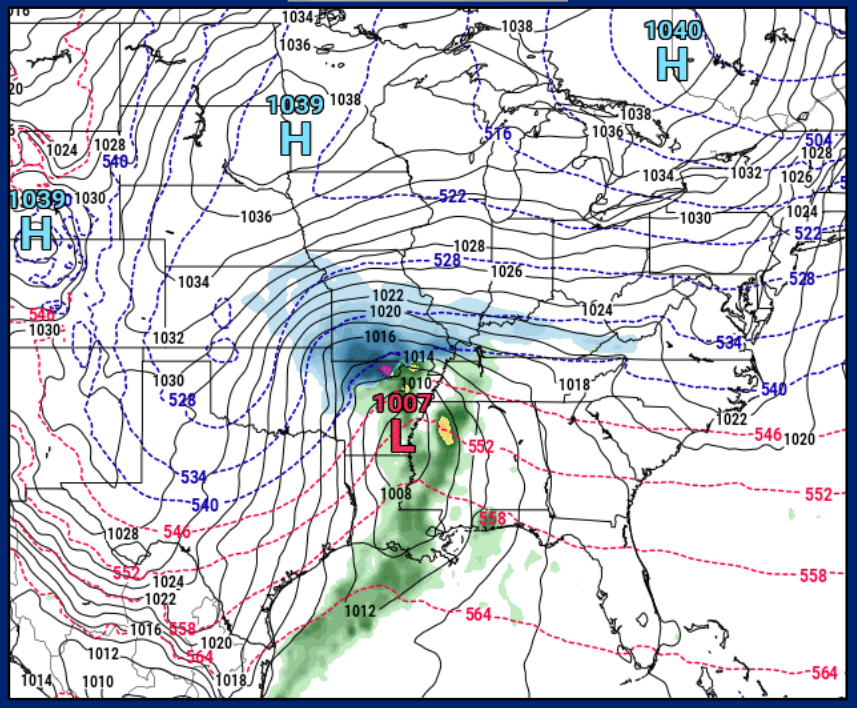


GFS/ECMWF 18Z Saturday

ECMWF



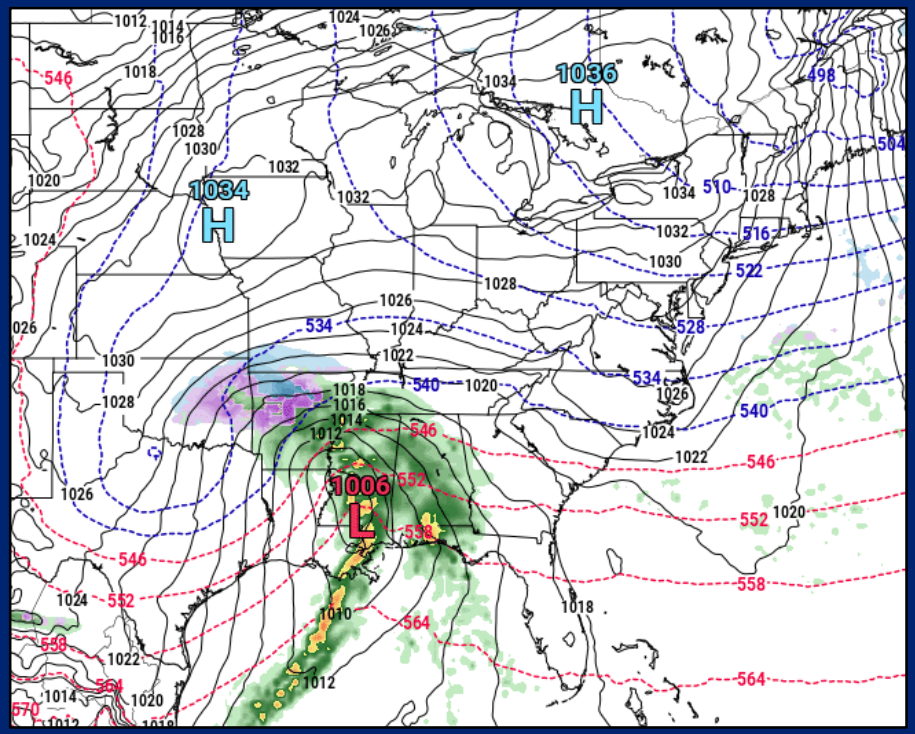
GFS



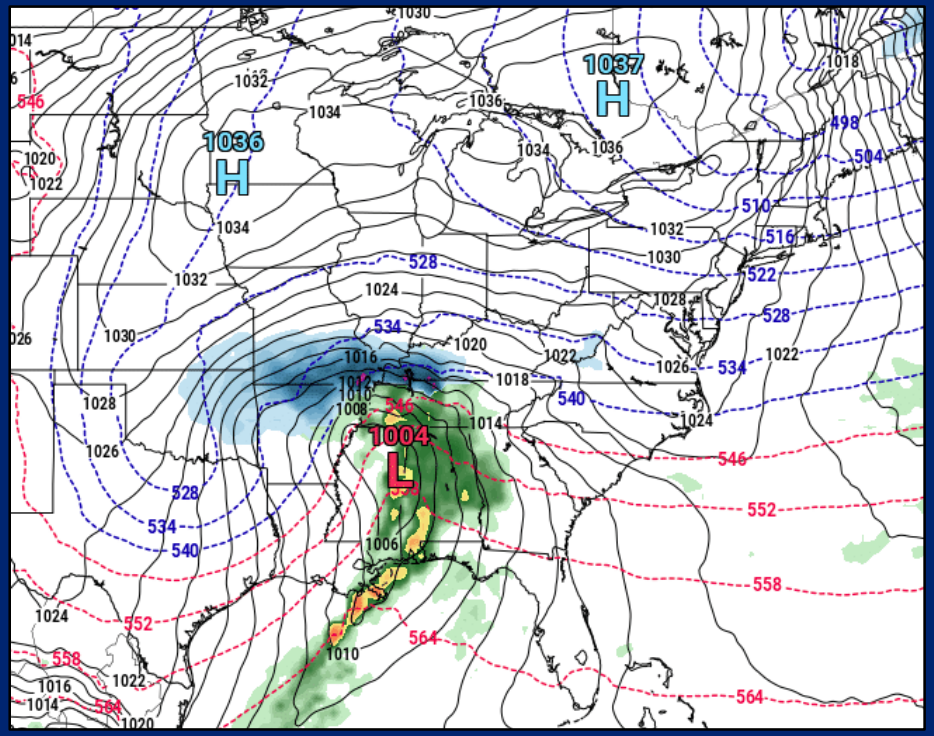
Timing is in relatively good agreement, with low moving into Mississippi River Valley by Saturday PM. GFS taking a more northerly track with low pressure system.

GFS/ECMWF 00Z Sunday

ECMWF



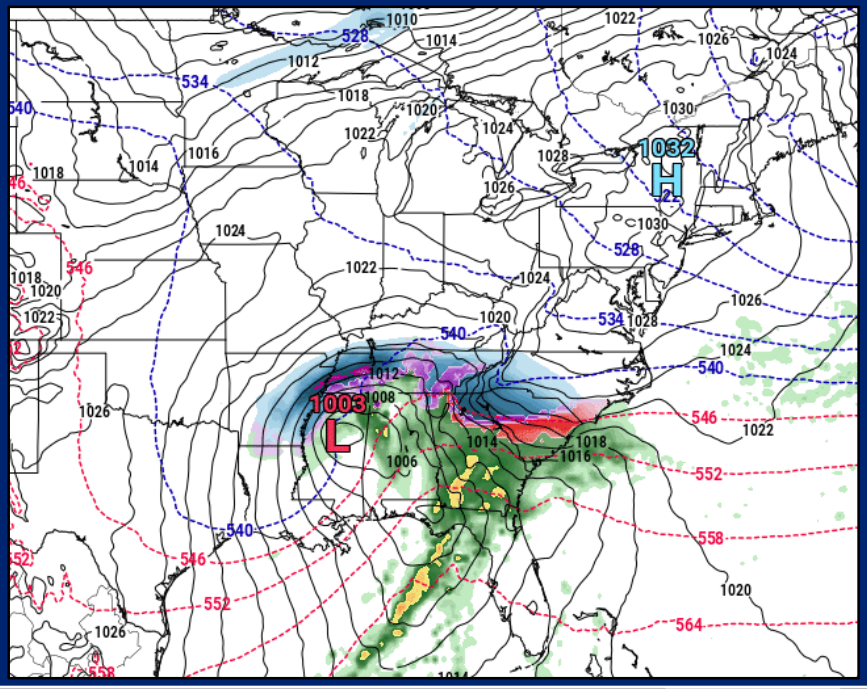
GFS



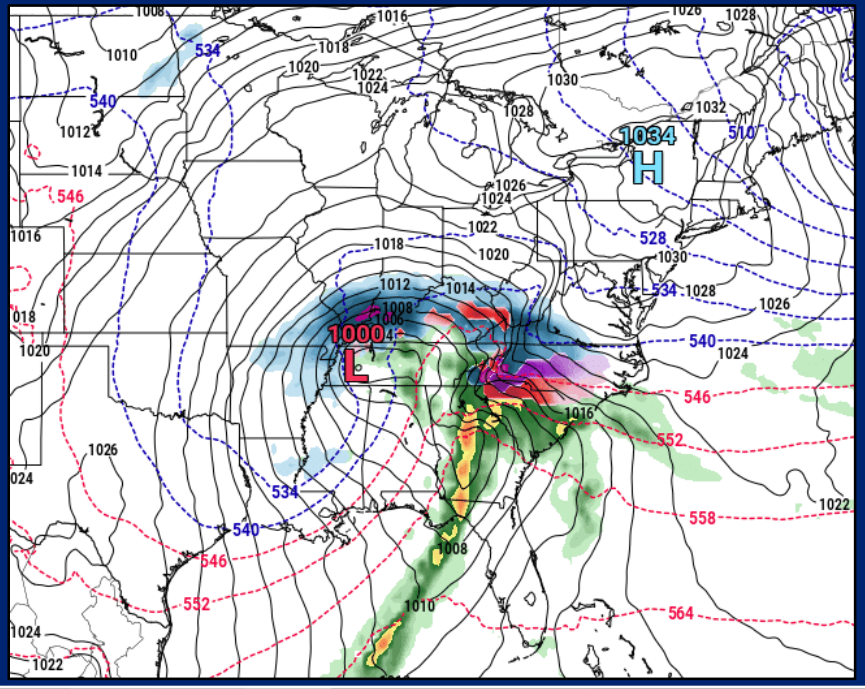
Wedging begins to develop on the east side of the Appalachians.
Precipitation starts to move into Georgia by Saturday evening as the low moves into AL.

GFS/ECMWF 12Z Sunday

ECMWF



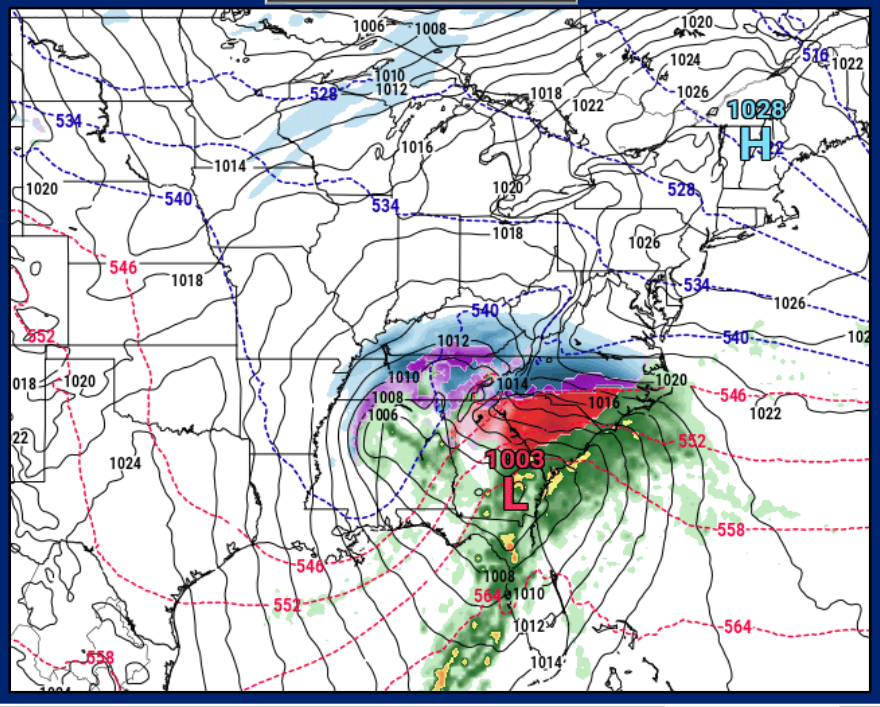
GFS



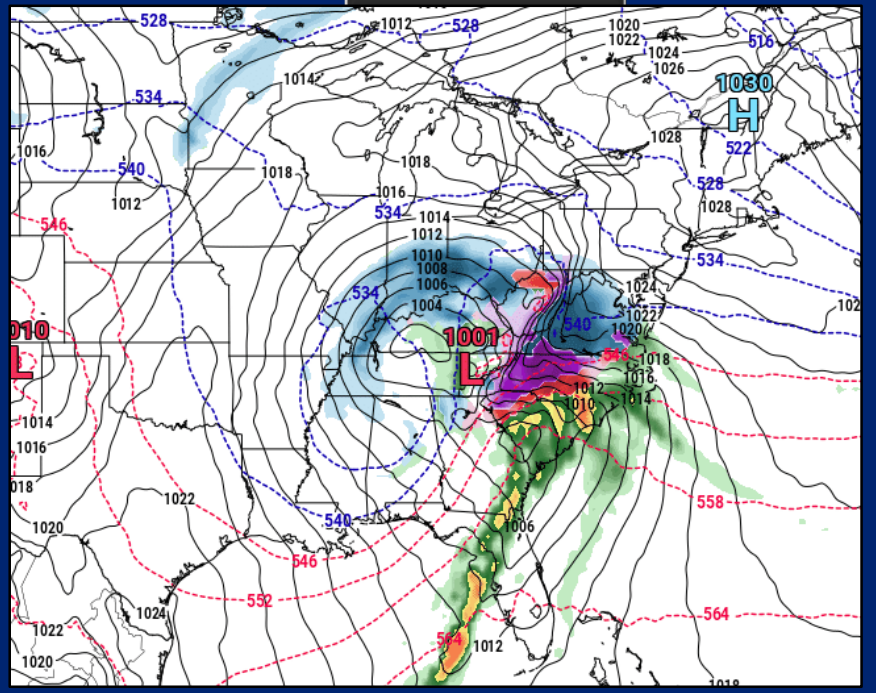
Wedging over NE Georgia as high pressure moves into New England.
Low continues to intensify overnight into Sunday morning and more widespread precip moves into GA.
Frozen precipitation in north Georgia as precip overruns the cold airmass under the wedge.
More southerly track indicated by ECMWF would lead to higher snow/ice totals.

GFS/ECMWF 18Z Sunday

ECMWF



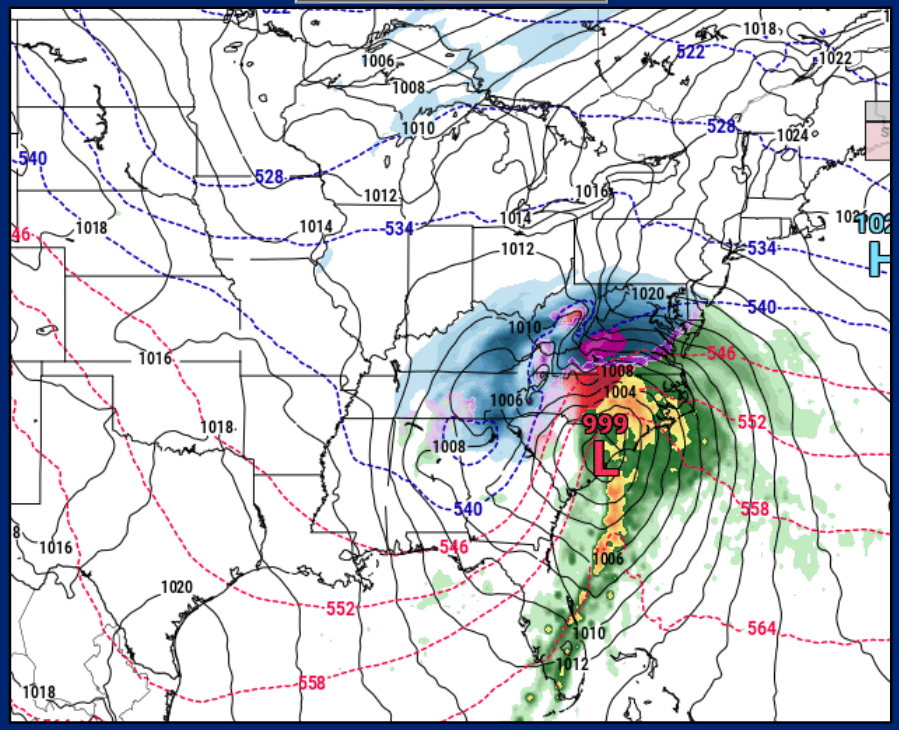
GFS



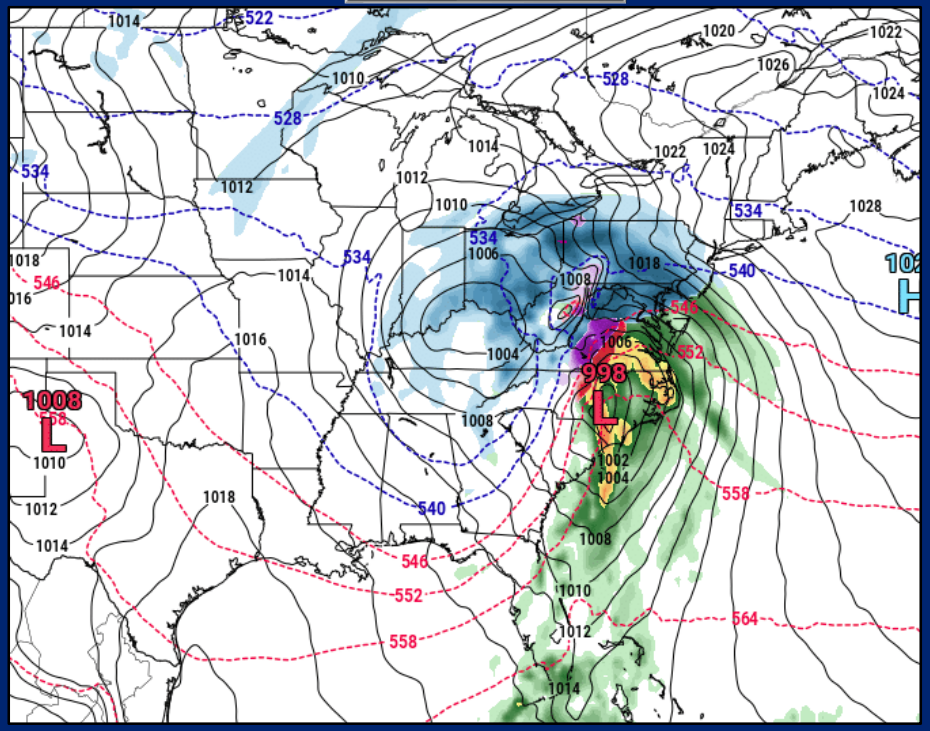
ECMWF indicates that the original low occludes over AL and a new low forms in south Georgia.
In contrast, this doesn't occur in GFS solution. Further northward position of low allows warm air to spread further north, reducing snow and ice amounts.

GFS/ECMWF 00Z Monday

ECMWF

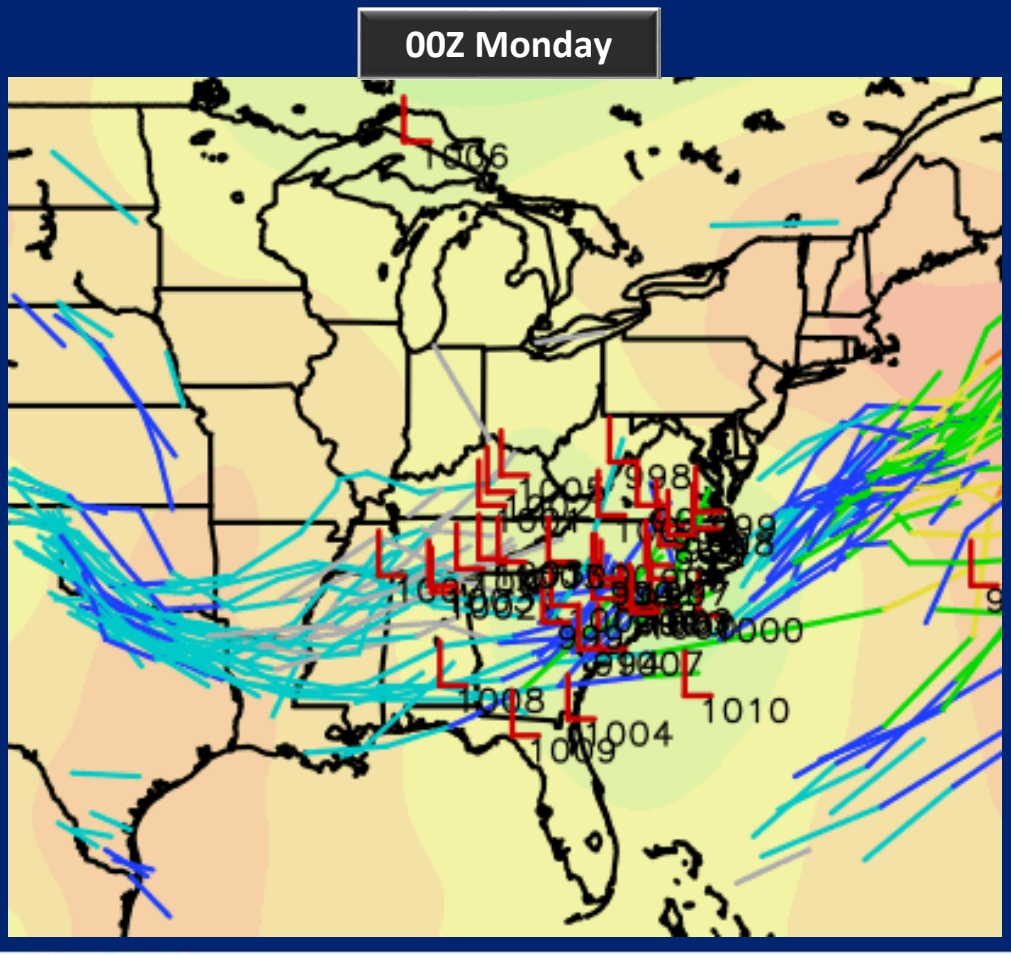


GFS



Low pressure moves towards the Mid-Atlantic coast.
Wrap-around precipitation on the back side of the low pressure.
540 line in the 1000-500 mb thickness positioned will into central Georgia -> Snow on back side.

GEFS Model Spread: Uncertainty



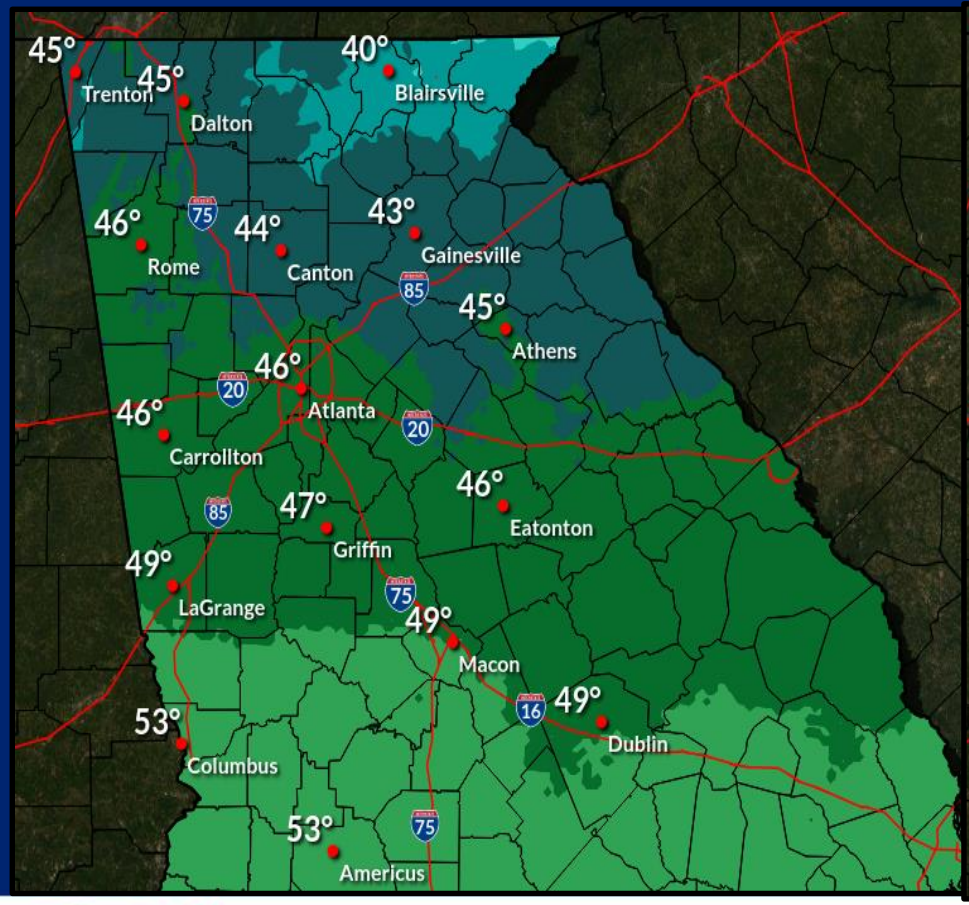
Considerable uncertainty remains between model runs.

Most inconsistency between 12Z Sunday – 00Z Monday as low pressure traverses the area.

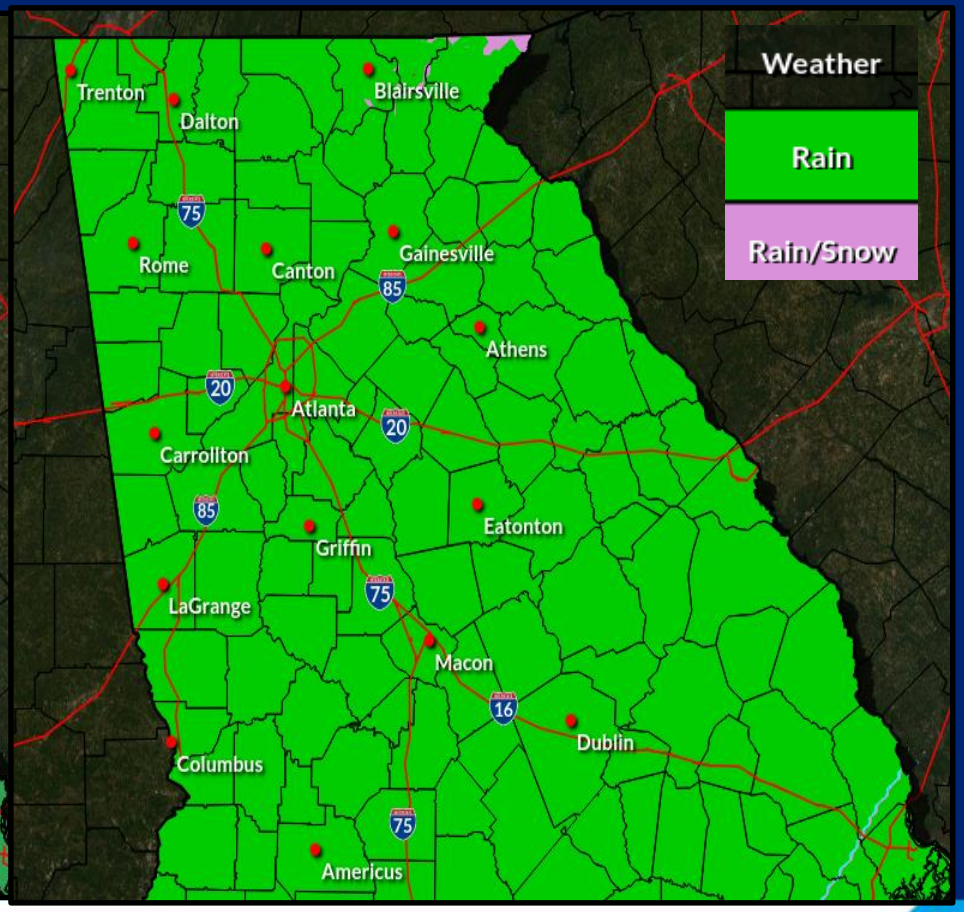
*****Be sure to monitor for future updates*****

Timing:
Saturday 7 PM EST

Temperatures

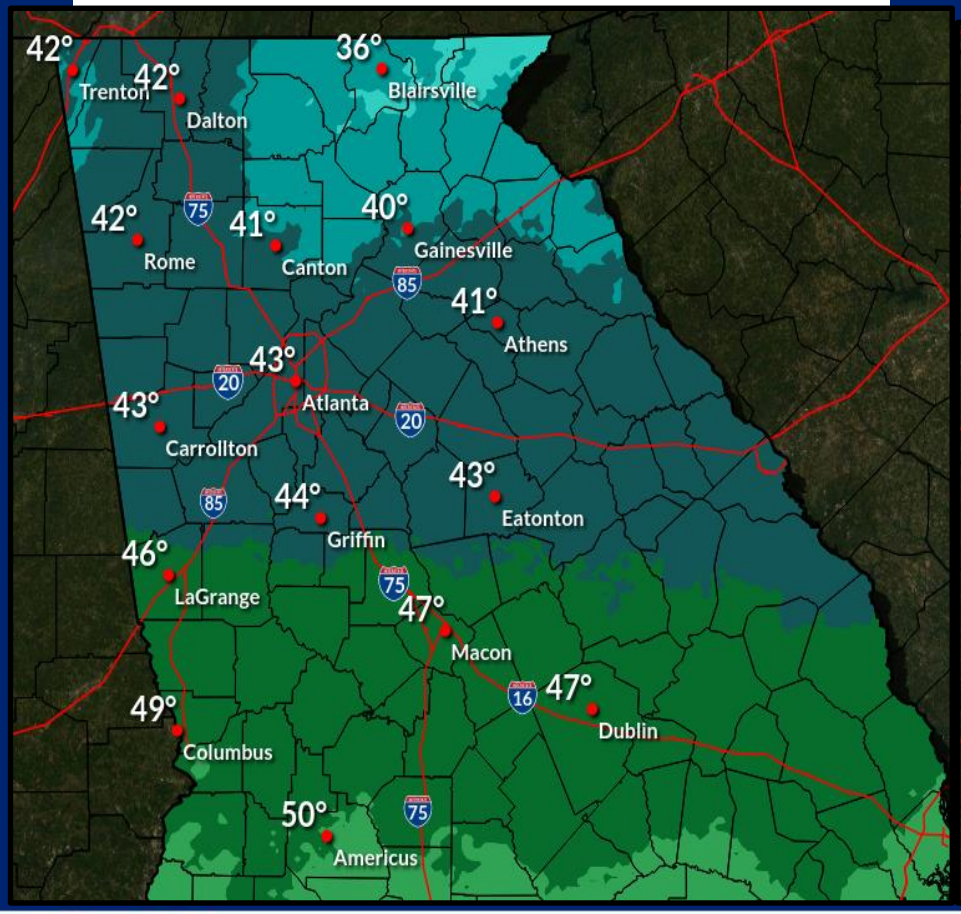


Precipitation Type

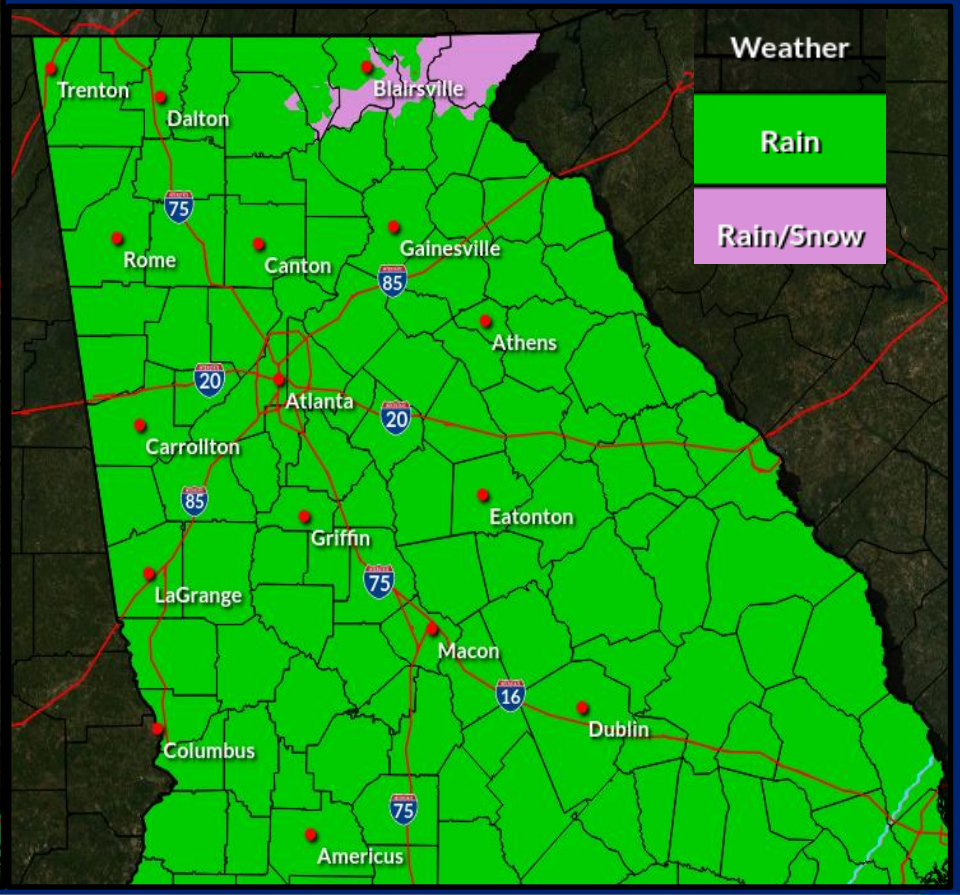


Saturday 10 PM EST

Temperatures



Precipitation Type



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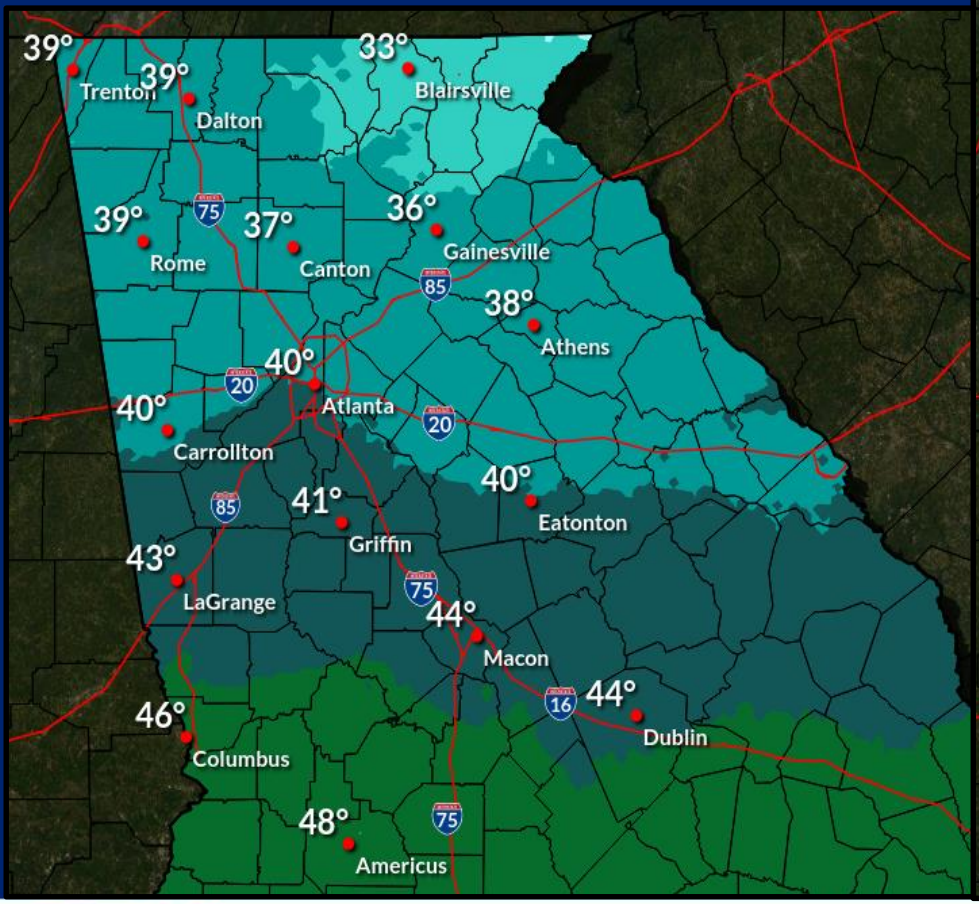
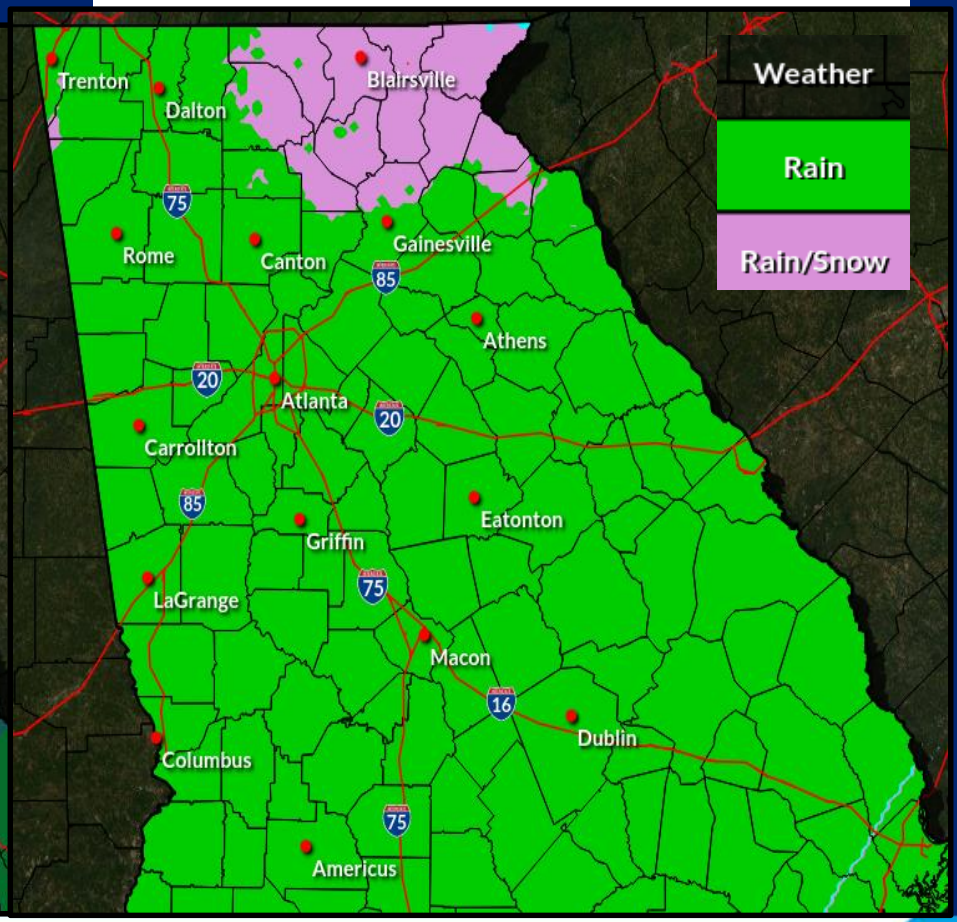
Sunday 1 AM EST

Temperatures



Precipitation Type



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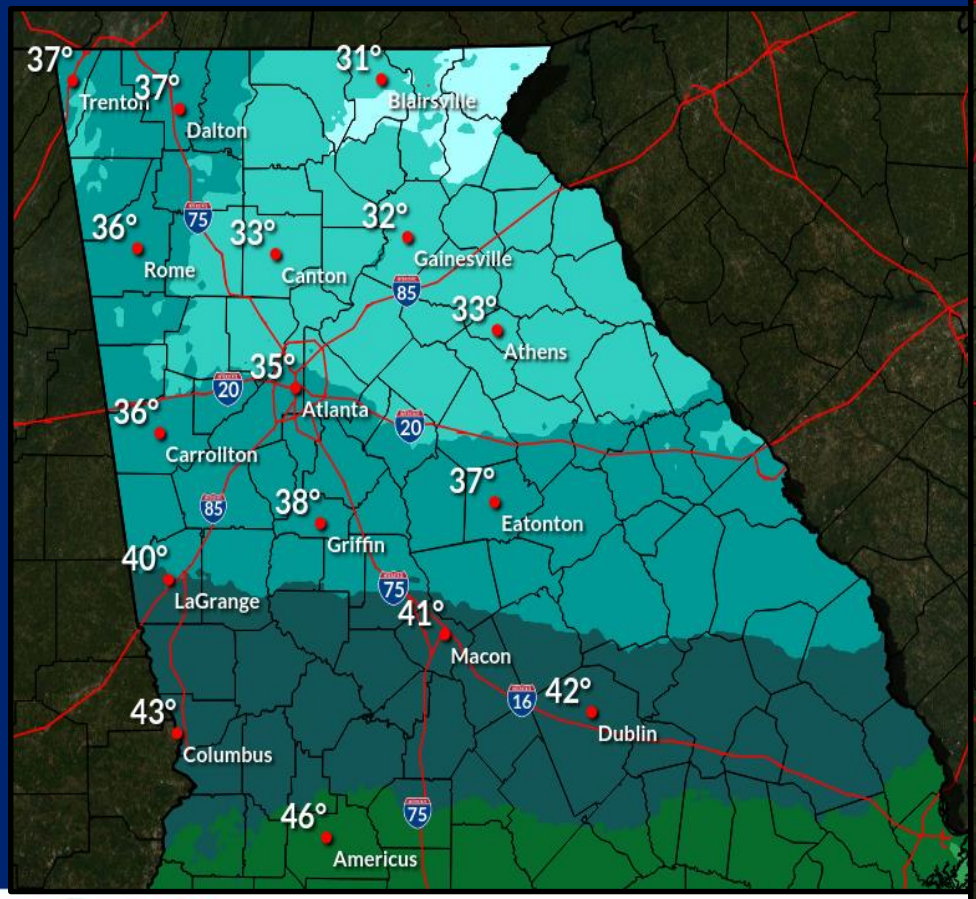
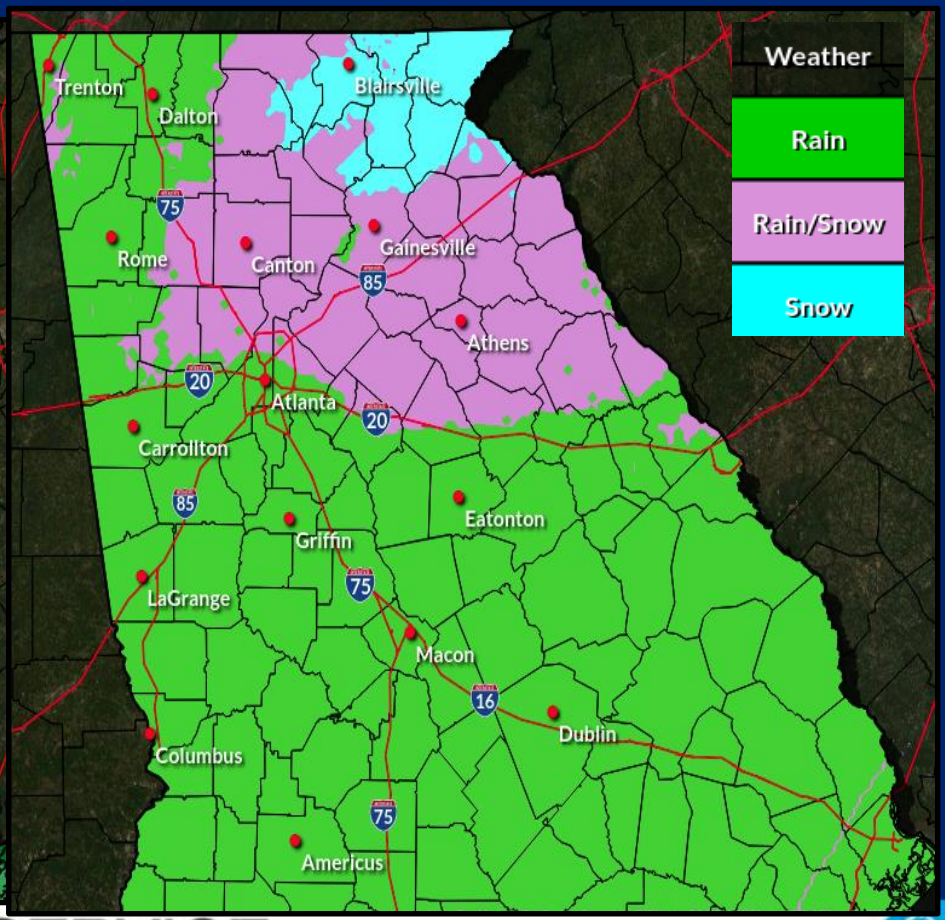
Sunday 4 AM EST

Temperatures



Precipitation Type



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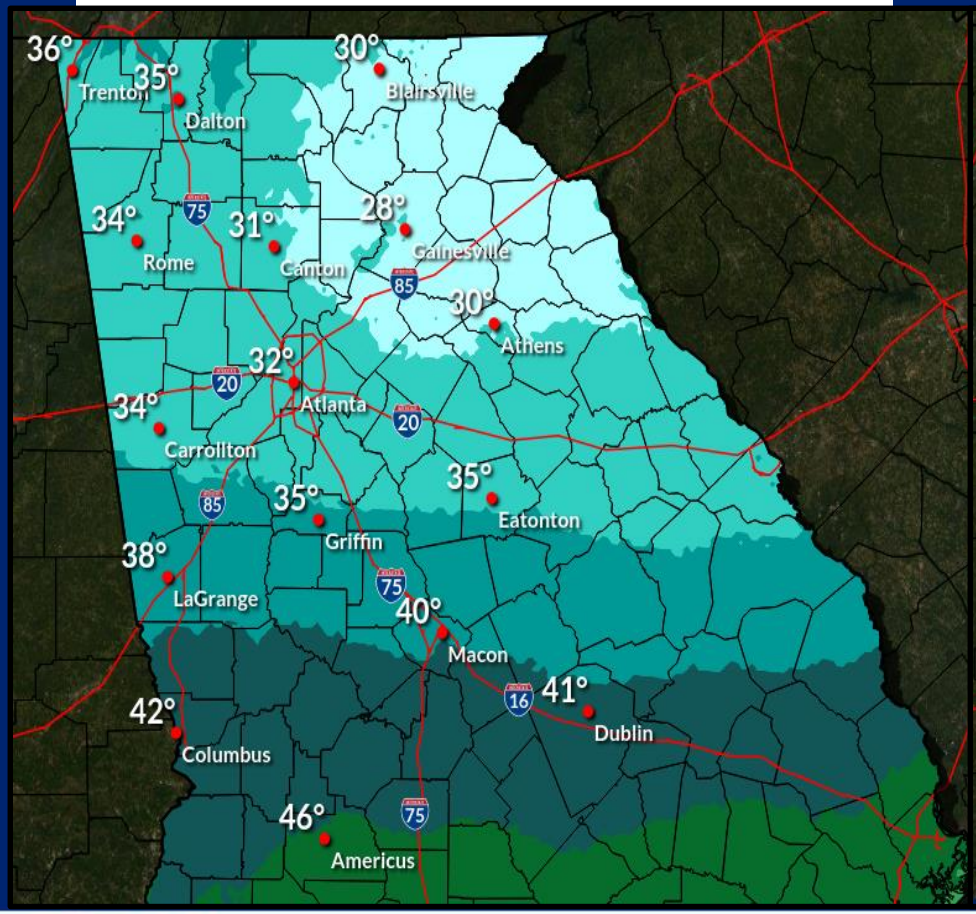
Sunday 7 AM EST

Temperatures



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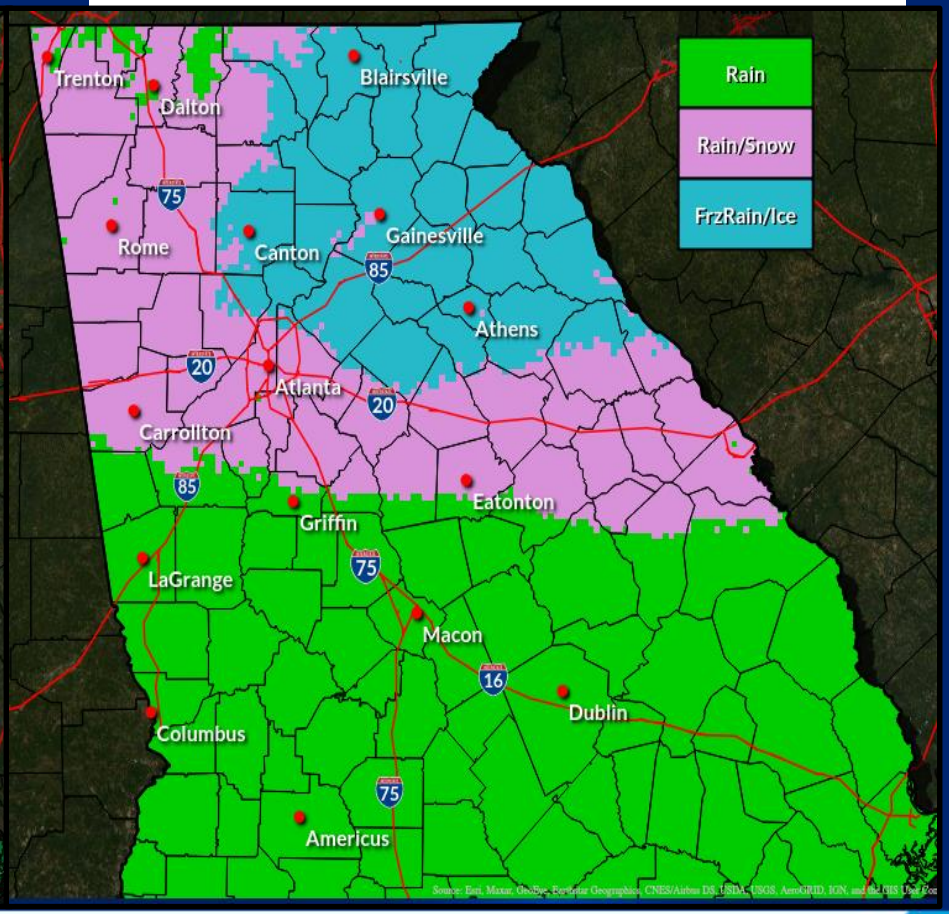

NATIONAL WEATHER SERVICE
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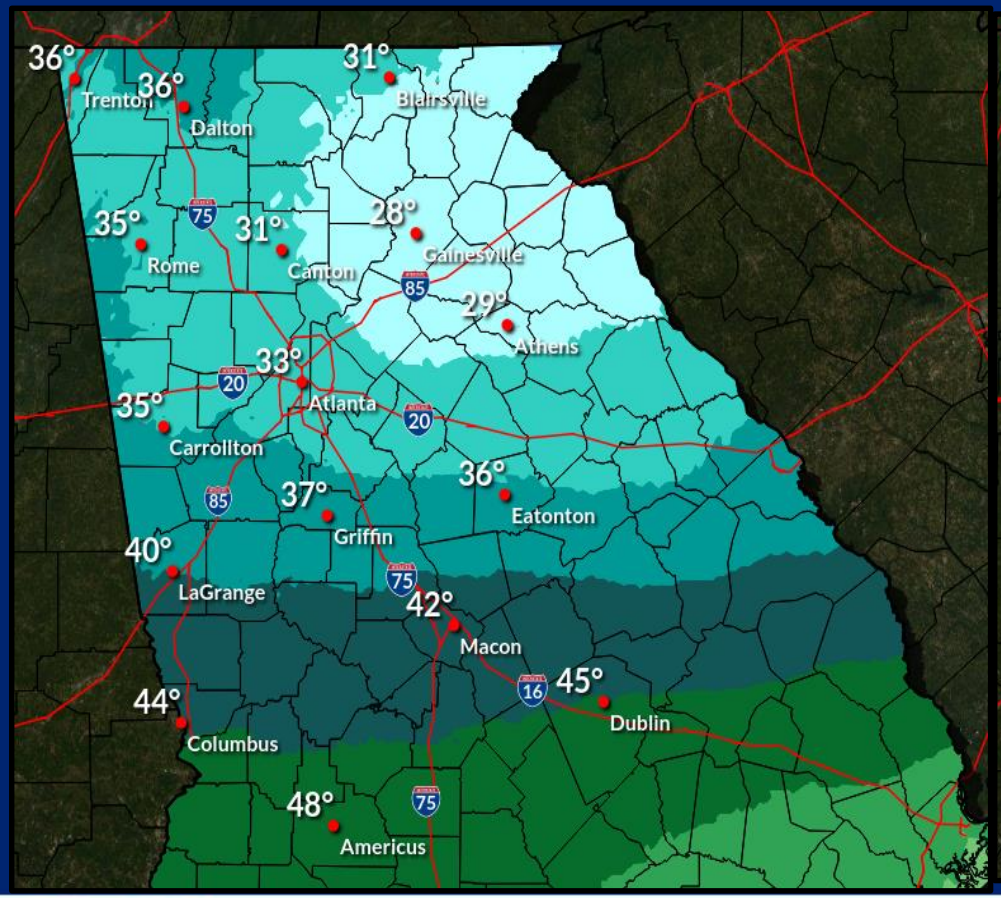
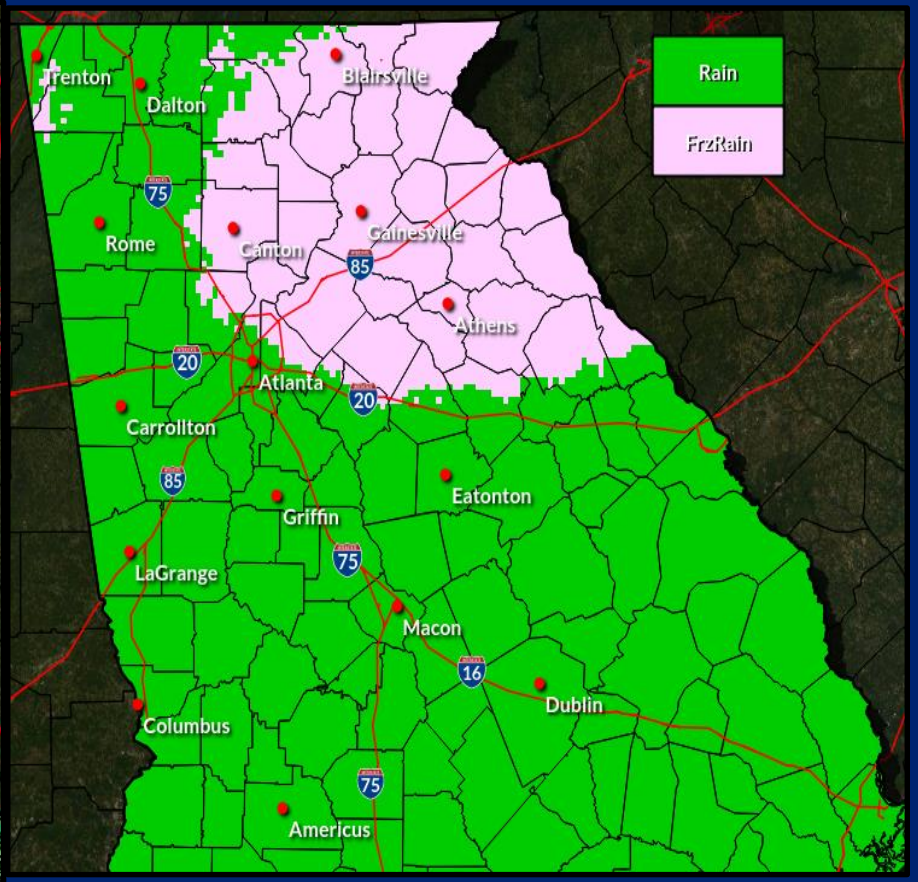
Sunday 10 AM EST

Temperatures

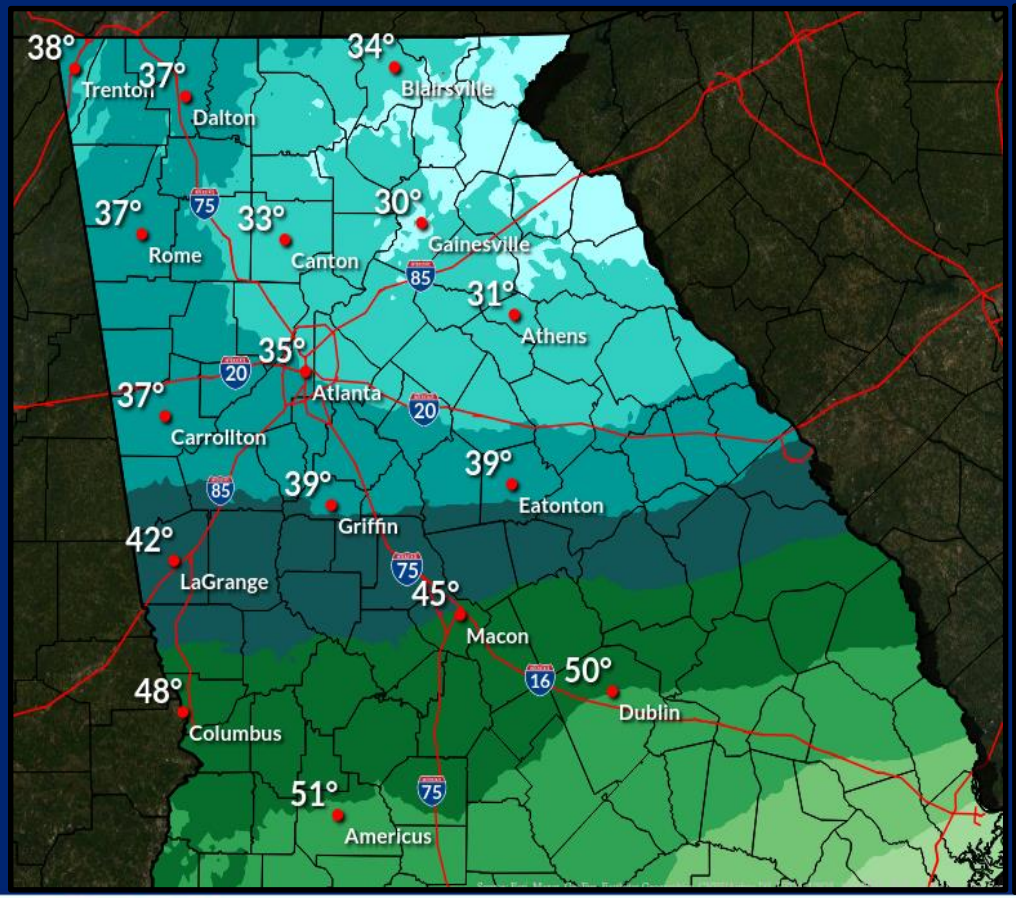


Precipitation Type

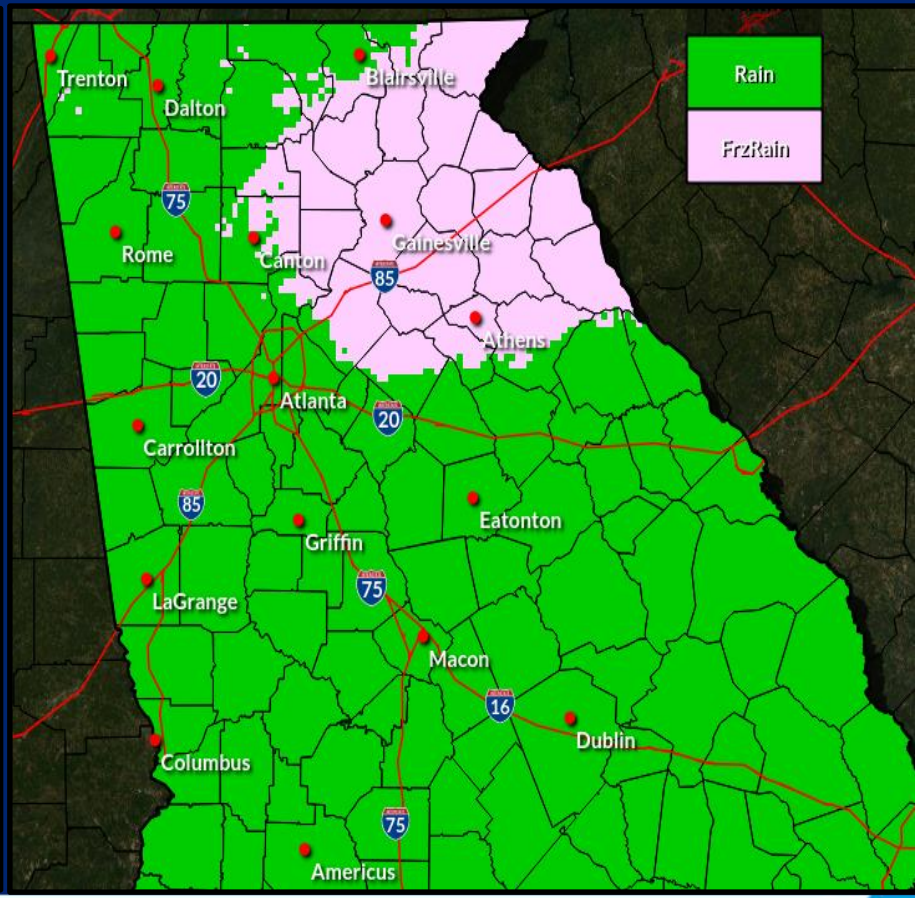


Sunday 1 PM EST

Temperatures



Precipitation Type



NATIONAL WEATHER SERVICE
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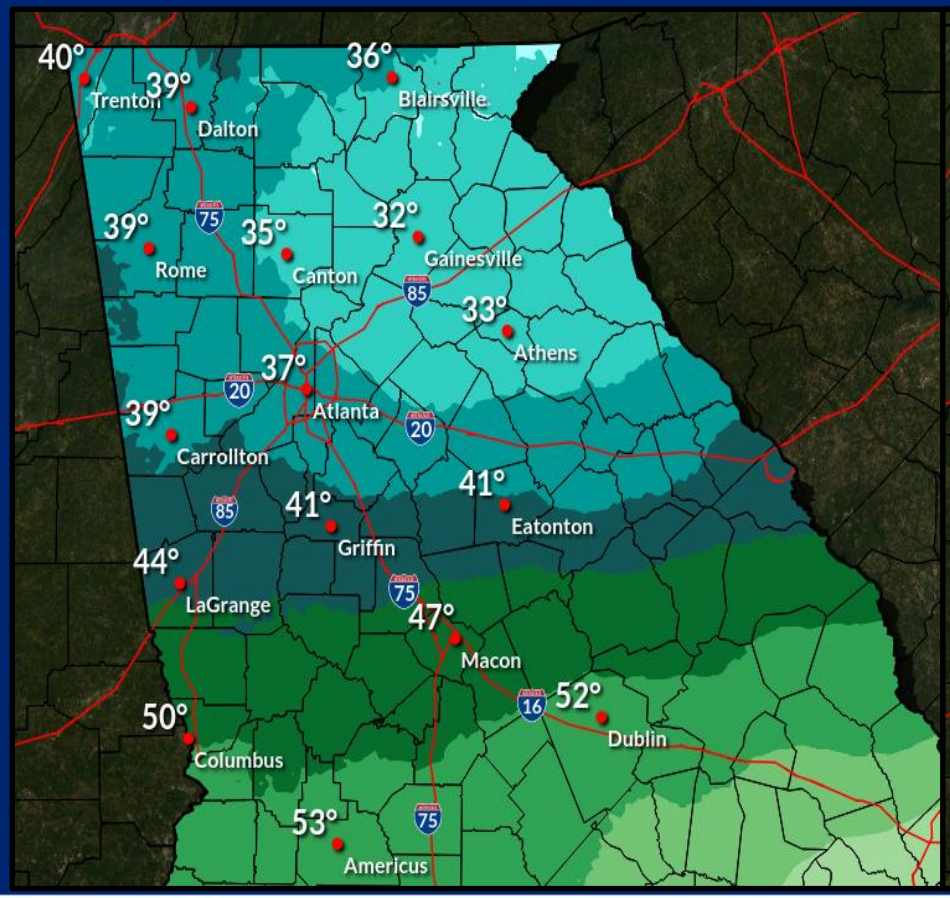
Sunday 4 PM EST

Temperatures



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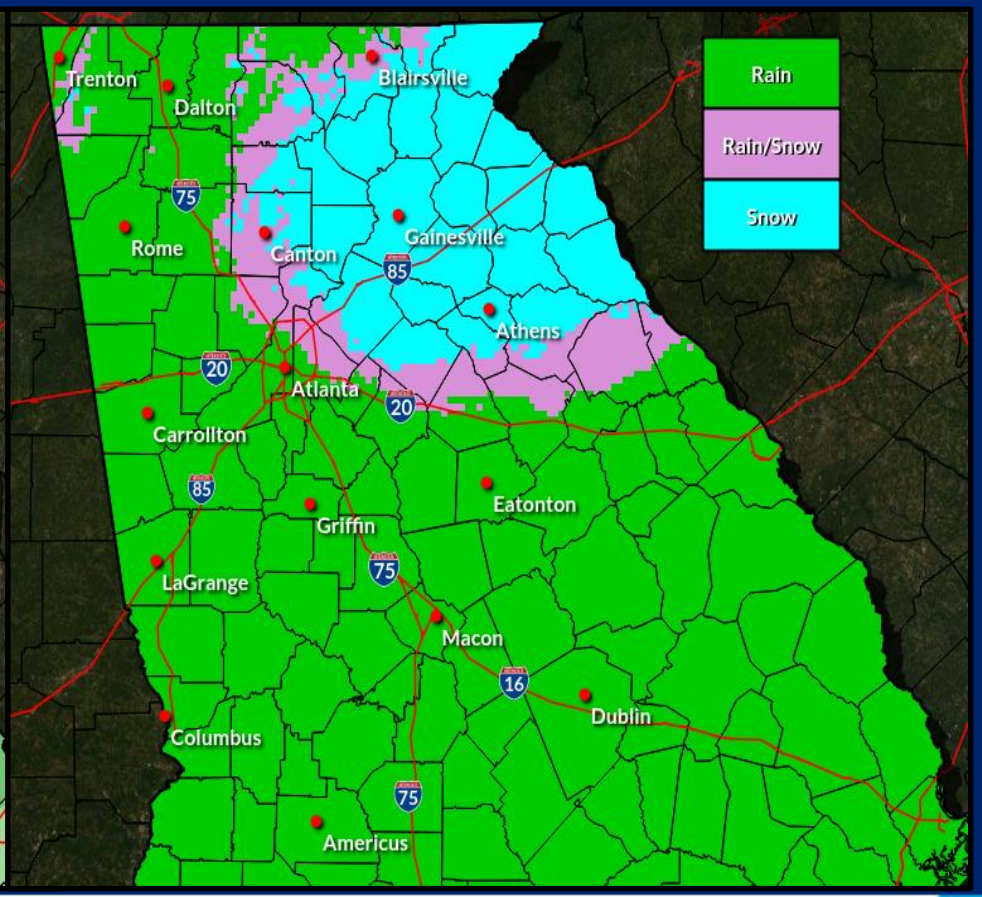
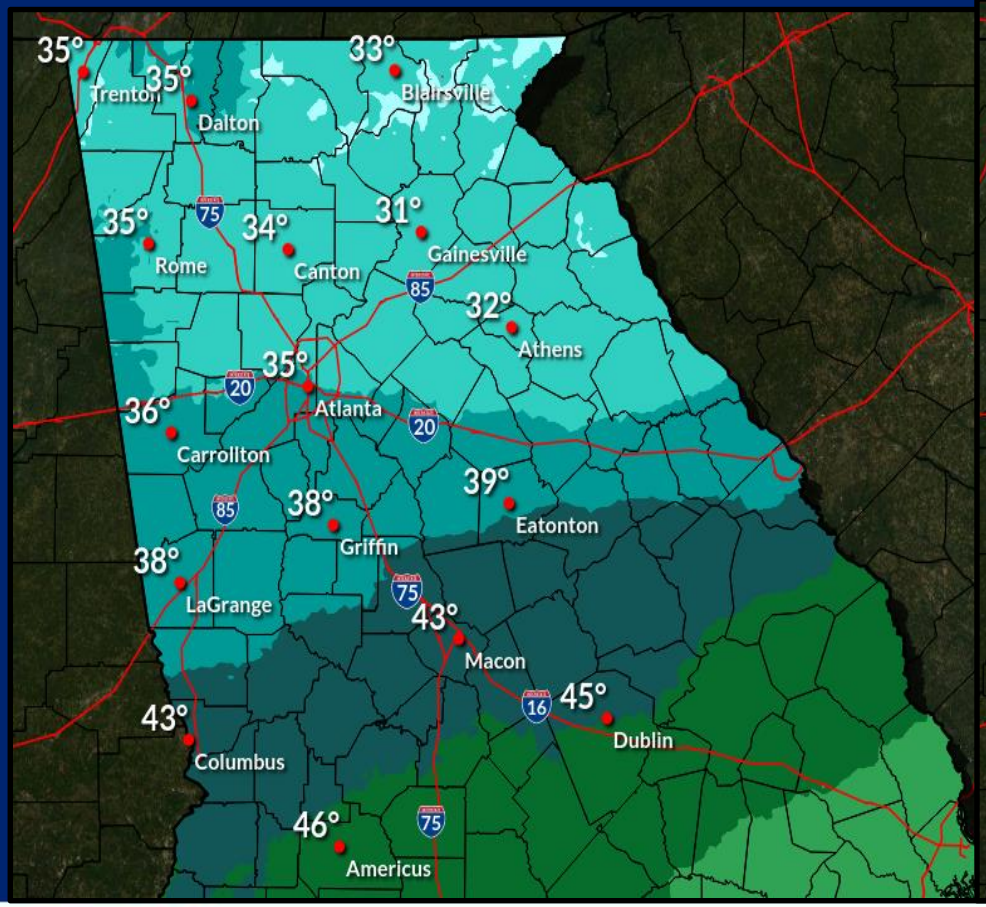


Sunday 7 PM EST

Temperatures



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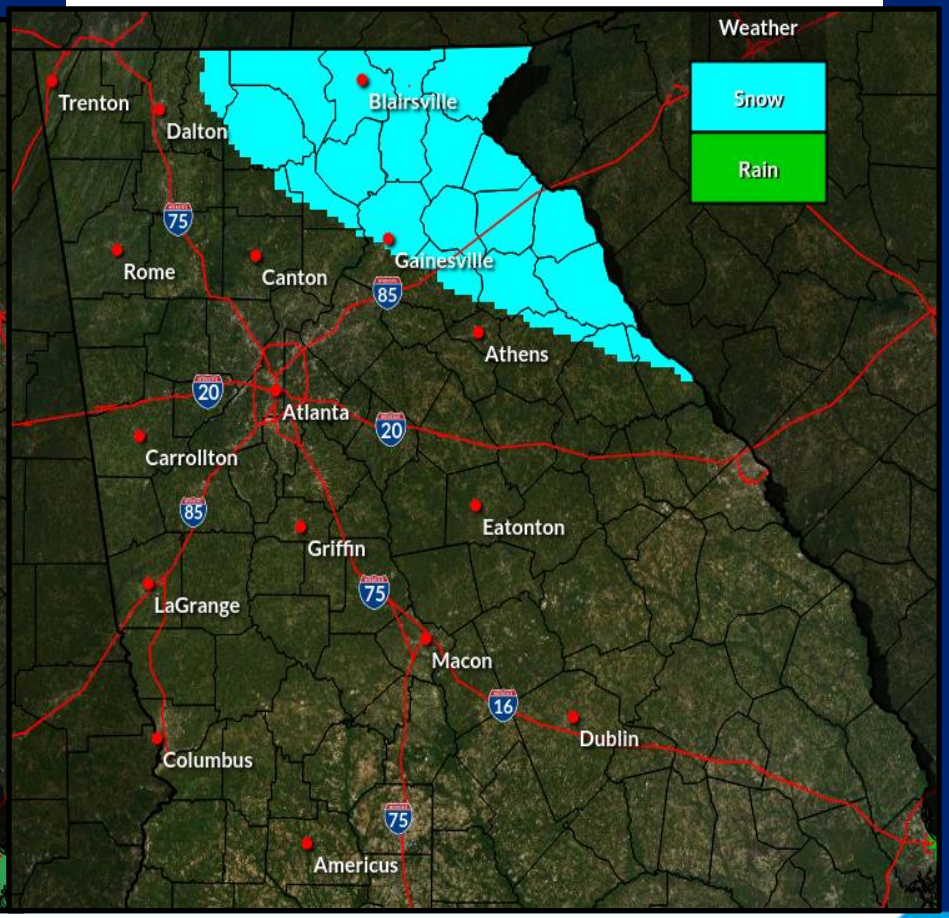
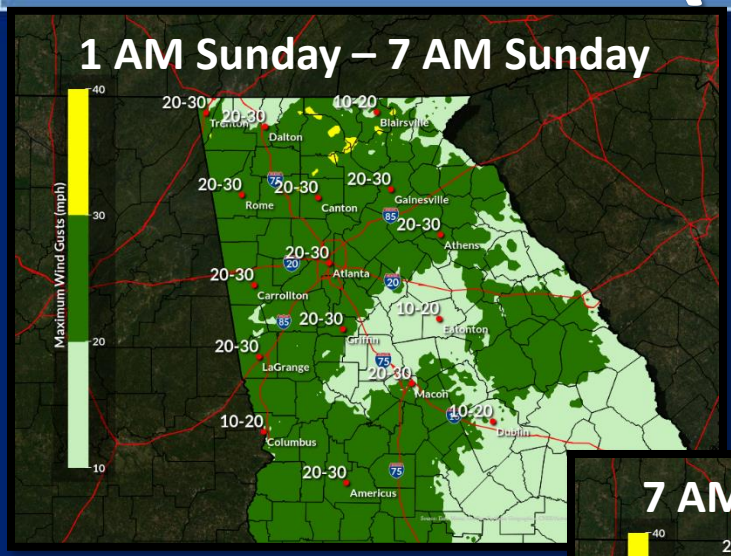
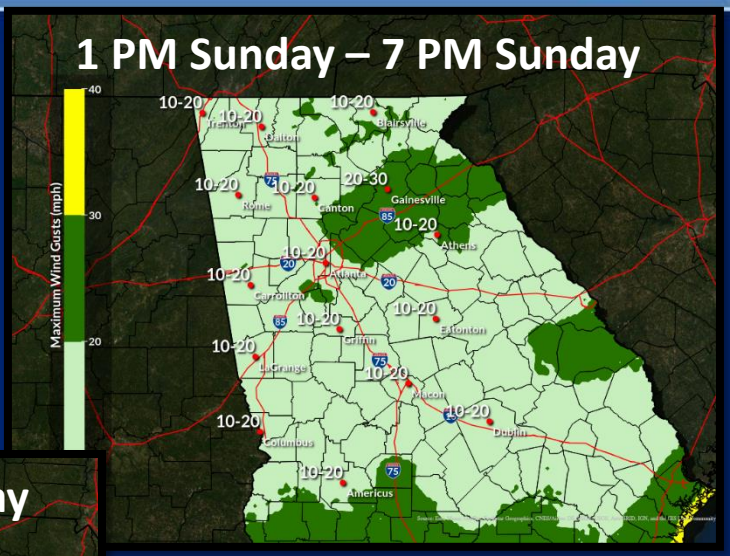
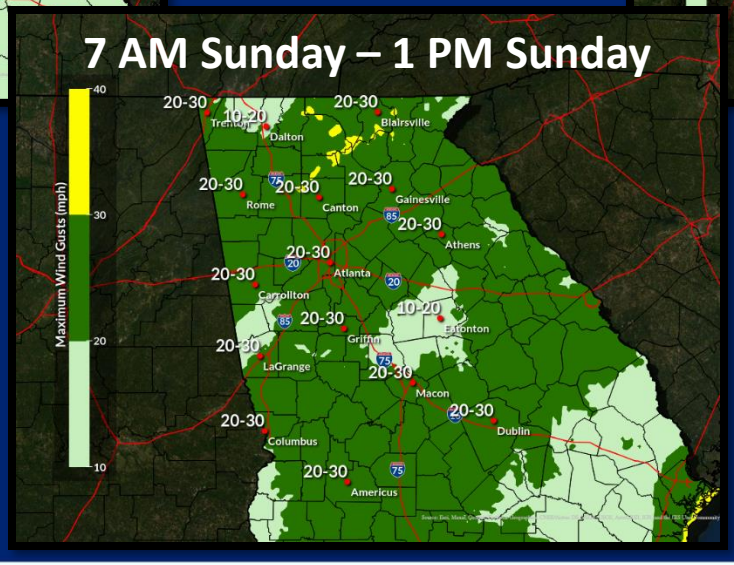


Peak Wind Speed (Sunday)







Strongest wind gusts expected Sunday AM through early afternoon

Winds decreasing through the evening Sunday to less than 20 mph Gusts after midnight

Summary

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- Potential for winter weather from Saturday evening into Sunday evening in north Georgia.
- Factors that will impact the forecast:
  - High pressure moving into New England – development of CAD wedge in far north Georgia.
  - Track and development of surface low pressure – how far north warmer air will spread.
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NWS Peachtree City / Atlanta

Next Briefing: 3PM Thursday, January 13th

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